

U.S. Patent Application Serial No. 09/673,194

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 11 has been added as follows:

Listing of Claims:

Claim 1 (Previously Presented): A water-based pigment dispersion comprising:
a pigment and a cross-linked thermoplastic resin containing carboxylic group,
wherein said pigment is dispersed with a water soluble or self-emulsifying thermoplastic resin containing carboxylic group and, after said pigment is dispersed, said water soluble or self-emulsifying thermoplastic resin is cross-linked with a cross-linking agent to form said cross-linked thermoplastic resin containing carboxylic group,
in which the ratio of said pigment to said water soluble or self-emulsifying thermoplastic resin (pigment/thermoplastic resin (weight ratio of effective solid matter)) is 10/10 to 10/1, and
the ratio of said cross-linking agent to said water soluble or self-emulsifying thermoplastic resin (cross-linking agent/thermoplastic resin (weight ratio of effective solid matter)) is 1/100 to 50/100.

Claim 2 (Previously Presented): The water-based pigment dispersion of Claim 1, wherein the water soluble or self-emulsifying thermoplastic resin containing carboxylic group is an acrylic resin or a polyurethane, and the thermoplastic resin has number average molecular weight of 2000 to 20000 and acid value of 30 to 300.

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Claim 3 (Original): The water-based pigment dispersion of Claim 1, wherein the cross-linking agent is an aqueous polymer of which reaction point for cross-linking is carboxylic group.

Claims 4 - 8 (Canceled).

Claim 9 (Original): A water-based ink containing the water-based pigment dispersion of Claim 1.

Claim 10 (Previously Presented): A process for preparing the water-based pigment dispersion of Claim 1, comprising the steps of:

- (1) predispersing a pigment and a water soluble or self-emulsifying thermoplastic resin containing carboxylic group to give a mixture,
- (2) treating said mixture by a dispersing machine so as to disperse said pigment with said thermoplastic resin to give a dispersion,
- (3) cross-linking said thermoplastic resin in said dispersion with a cross-linking agent, and
- (4) adjusting the pH of the dispersion containing said pigment and the cross-linked thermoplastic resin to alkaline range.

Claim 11 (New): The water-based pigment dispersion of claim 1, wherein the solid matter concentration of the water-based pigment dispersion is 5 to 40% by weight.